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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,196	10/23/2003	Greg R. Black	CS23157RA	8429

20280 7590 07/12/2005

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EXAMINER

DESIR, PIERRE LOUIS

ART UNIT PAPER NUMBER

2681

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<b>Application No.</b> 10/692,196	<b>Applicant(s)</b> BLACK, GREG R.	
	<b>Examiner</b> Pierre-Louis Desir	<b>Art Unit</b> 2681	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 March 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 20, 30-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Crockett et al. (Crockett), U.S. Patent No. 6781963.

Regarding claim 1, Crockett discloses a method of push-to-talk operation (see abstract), comprising: monitoring push-to-talk usage of a mobile communication device (i.e., monitoring call activity) (see col. 8, line 62), the usage being by a user of the mobile communication device (i.e., the monitoring of call activity is based on media flow inactivity. Thus, one skilled in the art would unhesitatingly conceptualize that the call activity is the call activity of one or more users) (see col. 8, lines 62-63); determining a push-to-talk metric based on the push to talk usage of the mobile communication (i.e., producing usage information for usage log server) (see col. 8, line 64); and selecting a push-to-talk session unavailability mitigation based on the push-to-talk metric (Crockett discloses one of the functions of the MCU is initiating call termination (i.e.,

push-to-talk session) based on media flow inactivity) (see col. 8, lines 62-63).

Regarding claim 2, Crockett discloses a method of push-to-talk operation (see claim 1 rejection), wherein the session unavailability comprises a delay of an activation of a push-to-talk session (i.e., after a period of inactivity, the user traffic channel may transition to the dormant state) (see col. 22, lines 51-53).

Regarding claim 3, Crockett discloses a method of push-to-talk operation (see claim 1 rejection), wherein the session unavailability mitigation comprises a mitigation of delay of an activation of a push-to-talk session (i.e., to reduce PTT latency, the group call signaling, such as the floor-control requests, floor-control responses, and dormancy wakeup messages, may be transmitted on some available common channels, without waiting for dedicated traffic channels to be re-established. Such common channels may be always available, regardless of the state of the mobiles, and may not require being requested and reassigned each time a user wishes to initiate a group call) (see col. 23, lines 26-34).

Regarding claim 20, Crockett discloses a method of push-to-talk operation for a mobile communication device, comprising: comparing at least one push-to-talk usage metric to a push-to-talk usage metric threshold, the push-to-talk usage metric being based on the usage of the mobile communication device by a user of the mobile communication device (i.e., after the regional dispatcher has retrieved the location of the group members, it may determine the MCU to which the call may be assigned. The regional dispatcher may make this decision based on the users' location information, loading, and availability of the MCUs. In an intra-regional call the users may be located in the same region, therefore the regional dispatcher may check the loading and availability of the MCU complex in the local region. If the regional dispatcher receives an

Art Unit: 2681

indication that the local MCU complex is overloaded or temporarily experiencing operational failures, then it may assign the call to a remote MCU) (see col. 13, line 60 through col. 14, line 1); also see col. 8, lines 44-67); selecting a session unavailability mitigation based on comparing the push-to-talk usage metric to the push-to-talk usage metric threshold (i.e., if the regional dispatcher receives an indication that the local MCU complex is overloading (information that be derived from the user log service) or temporarily experiencing operational failures, then it may assign the call to a remote MCU) (see col. 14, lines 1-4; also see col. 8, lines 44-67); establishing a push-to-talk session employing the session unavailability mitigation (see fig. 7, col. 14, lines 41-57); monitoring a parameter of operation of the push-to-talk session device (see col. 8, lines 62-63); and modifying the push-to-talk metric based on the parameter of operation of the push-to-talk session (see col. 9, lines 8-19).

Regarding claim 30, Crockett discloses an apparatus for push-to-talk operation (see abstract), comprising: a usage monitor configured to monitor push-to-talk usage of a mobile communication device (i.e., Media Control Unit) (see col. 8, lines 48-49, and 62); a metric determination module configured to determine a push-to-talk metric based on the push to talk usage of the mobile communication device (i.e., ULS) (see col. 9, lines 8-19); and a mitigation selector configured to select a push-to-talk session unavailability mitigation based on the push-to-talk metric (i.e., Media Control Unit in performing the function of initiating call termination based on media flow activity) (see col. 8, lines 48-63).

Regarding claim 31, Crockett discloses an apparatus (see claim 30 rejection) wherein the session unavailability mitigation comprises a mitigation of delay of an activation of a push-to-talk session (i.e., to reduce PTT latency, the group call signaling, such as the floor-control

Art Unit: 2681

requests, floor-control responses, and dormancy wakeup messages, may be transmitted on some available common channels, without waiting for dedicated traffic channels to be re-established. Such common channels may be always available, regardless of the state of the mobiles, and may not require being requested and reassigned each time a user wishes to initiate a group call) (see col. 23, lines 26-34).

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-8, 11-18, 21-25, 32-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crockett in view of Maggenti et al. (Maggenti), U.S. Patent No. 6477150.

Regarding claim 4, Crockett discloses a method as described above (see claim 1 rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method wherein the session unavailability mitigation further comprises selecting a packet switched channel type.

However, Maggenti discloses a method of push-to-talk operation wherein the session unavailability mitigation further comprises selecting a packet switched channel type (i.e., a MSC, which provides switching and interface circuitry, comprising a Inter Working Function (IFW), which is used for processing and converting voice/or data into packets suitable for a particular

Art Unit: 2681

data network through which communication takes place. When a user presses the push-to-talk key, a request is generated. With the pressing of the key, session unavailability mitigation takes place for the receiving user. This session unavailability mitigation comprises the selection of the appropriate channel, during which the data is formatted for transmission over the appropriate channel, circuit switched or packet switched) (see col. 6, lines 48-61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 5, Crockett discloses a method as described above (see claim 1 rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method wherein the session unavailability mitigation further comprises establishing a reverse link for a selected time period in anticipation that a reverse push-to-talk session is established.

However, Maggenti discloses a method of push-to-talk operation wherein the session unavailability mitigation further comprises establishing a reverse link for a selected time period in anticipation that a reverse push-to-talk session is established (Maggenti discloses that each communication device member can establish forward link and reverse link. In addition, , when a user presses the push-to-talk (PTT) key to send a message, a response message is expected within a predetermined; thus, when a message is sent after the PTT is pressed, a response

Art Unit: 2681

message is expected through the forward link within a predetermined time) (see col. 6, lines 24-31, and col. 30, lines 43-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 6, Crockett discloses a method as described above (see claim 1 rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method wherein the session unavailability mitigation comprises holding a push-to-talk connection for a selected time period after release of a push-to-talk button in anticipation that a subsequent push-to-talk session is established.

However, Maggenti discloses a method wherein the session unavailability mitigation comprises holding a push-to-talk connection for a selected time period after release of a push-to-talk button in anticipation that a subsequent push-to-talk session is established (the PTT key is pressed so that a message could be sent. The key is released so that a response message can be received within a predetermined time. Therefore, one skill in the art would unhesitatingly conceptualize the inherency of the fact that the session unavailability mitigation comprises holding a PTT connection for a selected period of time after release of the PTT key in anticipation that a subsequent PTT session is established) (see fig. 8, col. 30, lines 43-48, col. 33, lines 59-67, and col. 34, lines 1-9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the



Art Unit: 2681

invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 7, Crockett discloses a method as described above (see claim 1 rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method wherein the session unavailability mitigation is a mitigation of interruption of a push-to-talk channel.

However, Maggenti discloses a method wherein the session unavailability mitigation is a mitigation of interruption of a push-to-talk channel (the response message that is sent back due to the PTT message comprises several fields used to convey information. One the field is defined to indicate granting, denying, or revoking the transmission privilege. And, another field is defined to indicate that a higher priority has been granted transmission privilege. One skill in the art would immediately envision with granting of transmission privilege to the higher priority, an interruption of the push-to-talk channel takes place) (see col. 31, lines 10-24).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 8, Crockett discloses a method as described above (see claim 1 rejection).

Although Crockett discloses a method as described, Crockett does not specifically

disclose a method wherein the session unavailability mitigation comprises selecting a circuit switched channel type.

However, Maggenti discloses a method wherein the session unavailability mitigation comprises selecting a circuit switched channel type (Crockett discloses a MSC, which provides switching and interface circuitry, comprising a Inter Working Function (IFW), which is used for processing and converting voice/or data into packets suitable for a particular data network through which communication takes place. When a user presses the push-to-talk key, a request is generated. With the pressing of the key, session unavailability mitigation takes place for the receiving user. This session unavailability mitigation comprises the selection of the appropriate channel, during which the data is formatted for transmission over the appropriate channel, circuit switched or packet switched) (see col. 6, lines 48-61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 11, Crockett discloses a method as described above (see claim 1 rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method wherein the push-to-talk metric is based on a measurement of a length of a delay of push-to-talk channel activation.

However, Maggenti discloses a method wherein the push-to-talk metric is based on a measurement of a length of a delay of a push-to-talk channel activation (i.e. determination of a

push-to-talk metric is based on the predetermination on how long it takes to receive a response message after transmitting a message. In addition, Maggenti described a timer, which is called an inactivity timer. The disclosed timer is used for measuring a net's hang time, which is defined as a time period in which no member of a net is transmitting information to the other member) (see col. 30, lines 43-45, col. 34, lines 16-19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 12, Crockett discloses a method as described above (see claim 1 rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method wherein the push-to-talk metric is based on a probability of an activation of a subsequent push-to-talk session.

However, Maggenti discloses a method wherein the push-to-talk metric is based on a probability of an activation of a subsequent push-to-talk session (i.e., the inactivity timer disclosed by Maggenti is used to measure hang time; which expectedly, as one skilled in the art would have perceived, covers the claimed invention as related to the push-to-talk metric/calculation/measurement based on a probability of an activation of a subsequent PTT session) (see col. 30, lines 43-45, col. 34, lines 16-19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so

would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 13, Crockett discloses a method as described above (see claim 1 rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method wherein the push-to-talk metric is based on a time measurement of the length of time of a push-to-talk channel interruption.

However, Maggenti discloses a method wherein the push-to-talk metric is based on a time measurement of the length of time of a push-to-talk channel interruption (the response message that is sent back due to the PTT message comprises several fields used to convey information. One the field is defined to indicate granting, denying, or revoking the transmission privilege. And, another field is defined to indicate that a higher priority has been granted transmission privilege. One skill in the art would immediately envision with granting of transmission privilege to the higher priority, an interruption of the push-to-talk channel takes place. Thus, knowing the fact that a response message is expected within a predetermined time after pressing the PTT key to start a communication process, and that the inactivity timer is used to measure hang time, one skill in the art would unhesitatingly conceptualize that the push-to-talk metric is based on a time measurement of the length of time of a push-to-talk channel interruption) (see col. 30, lines 43-45, col. 31, lines 10-24, and col. 34, lines 16-19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group

communications with other users of different communication devices and technologies.

Regarding claim 14, Crockett discloses a method as described above (see claim 1 rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method wherein the push-to-talk metric is based on a probability of a push-to-talk channel interruption.

However, Maggenti discloses a method wherein the push-to-talk metric is based on a probability of a push-to-talk channel interruption (one the field, which is used to convey information, is defined to indicate granting, denying, or revoking the transmission privilege. And, another field is defined to indicate that a higher priority has been granted transmission privilege. One skill in the art would immediately envision with granting of transmission privilege to the higher priority, an interruption of the push-to-talk channel takes place. Thus, knowing the fact that a response message is expected within a predetermined time after pressing the PTT key to start a communication process, and that the inactivity timer is used to measure hang time, one skill in the art would unhesitatingly conceptualize the push-to-talk metric is based on a probability of a push-to-talk channel interruption (see col. 30, lines 43-45, col. 31, lines 10-24, and col. 34, lines 16-19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 15, Crockett discloses a method as described above (see claim 1

rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method wherein the push-to-talk metric is based on a time between subsequent push-to-talk sessions from the same mobile communication device.

However, Maggenti discloses a method wherein the push-to-talk metric is based on a time between subsequent push-to-talk sessions from the same mobile communication device (when a message is sent, the sender expects a response message, and any subsequent message thereafter associated with a message sent, within a predetermined time) (see col. 30, lines 43-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 16, Crockett discloses a method as described above (see claim 1 rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method wherein the push-to-talk metric is based on a probability of subsequent push-to-talk sessions from the same mobile communication device.

However, Maggenti discloses a method wherein the push-to-talk metric is based on a probability of subsequent push-to-talk sessions from the same mobile communication device (when a message is sent, the sender expects a response message, and any subsequent message thereafter associated with a message sent, within a predetermined time) (see col. 30, lines 43-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

Art Unit: 2681

invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 17, Crockett discloses a method as described above (see claim 1 rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method wherein the push-to-talk metric is based on a probability of a push-to-talk session from one mobile communication device and a subsequent push-to-talk session from another mobile communication device on a reverse channel.

However, Maggenti discloses a method wherein the push-to-talk metric is based on a probability of a push-to-talk session from one mobile communication device and a subsequent push-to-talk session from another mobile communication device on a reverse channel (when a message is sent, the sender expects a response message, and any subsequent message thereafter associated with a message sent, within a predetermined; thus, when a message is sent after the PTT is pressed, a response message is expected through the forward link within a predetermined time) (see col. 6, lines 24-31, and col. 30, lines 43-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 18, Crockett discloses a method as described above (see claim 1 rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method wherein the push-to-talk metric is based on a length of time of a push-to-talk session.

However, Maggenti discloses a method wherein the push-to-talk metric is based on a length of time of a push-to-talk session (i.e. for every transmitted message, a response message is expected within a predetermined time; thus, it is clear that a determination of a push-to-talk metric is based on the predetermination on how long it takes to receive a response message after transmitting a message) (see col. 30, lines 43-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 21, Crockett discloses a method as described above (see claim 20 rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method wherein the session unavailability comprises at least one of delay of an activation of a push-to-talk channel and an interruption of a push-to-talk channel

However, Maggenti discloses a method wherein the session unavailability comprises at least one of delay of an activation of a push-to-talk channel and an interruption of a push-to-talk channel (Crockett discloses delay is associated with transitioning a communication device out of the dormant state to the connected state; thus, one skill in the art would unhesitatingly conceptualize that the session of unavailability is comprised a delay of an activation of a push-to-



talk session) (see col. 35, lines 48-49).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to reduce both apparent PTT latency experienced by the talker and total time required to re-establish traffic channels for participating mobiles without negatively impacting system capacity.

Regarding claim 22, Crockett discloses a method as described above (see claim 20 rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method further comprising modifying a session unavailability mitigation parameter as a function of a push-to-talk usage metric.

However, Maggenti discloses a method further comprising modifying a session unavailability mitigation parameter as a function of a push-to-talk usage metric (for e.g. if a response message is not received within a predetermined time after having sent a request message, a modification process takes place by retransmitting the request. It is worth to note that part of the modification is the fact that the predetermined time can be for a fixed time or can be altered accordingly) (see col. 30, lines 43-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 23, Crockett discloses a method as described above (see claim 22

rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method the session unavailability mitigation parameter comprises a time to delay the end of a push-to-talk session after a user releases a push-to-talk button.

However, Maggenti discloses a method wherein the session unavailability mitigation parameter comprises a time to delay the end of a push-to-talk session after a user releases a push-to-talk button (Crockett discloses because of the delay associated with transitioning a communication device out of the dormant state to the connected state, the communication device performs voice buffering to mitigate the transition delay) (see 35, lines 48-51)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to reduce both apparent PTT latency experienced by the talker and total time required to re-establish traffic channels for participating mobiles without negatively impacting system capacity.

Regarding claim 24, Crockett discloses a method as described above (see claim 22 rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method wherein the session unavailability mitigation parameter comprises a selection of a circuit switched push-to-talk session and a packet switched push-to-talk session.

However, Maggenti discloses a method wherein the session unavailability mitigation parameter comprises a selection of a circuit switched push-to-talk session and a packet switched push-to-talk session (Crockett discloses a MSC, which provides switching and interface

circuitry, comprising a Inter Working Function (IFW), which is used for processing and converting voice/or data into packets suitable for a particular data network through which communication takes place. When a user presses the push-to-talk key, a request is generated. With the pressing of the key, session unavailability mitigation takes place for the receiving user. This session unavailability mitigation comprises the selection of the appropriate channel, during which the data is formatted for transmission over the appropriate channel, circuit switched or packet switched) (see col. 6, lines 48-61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 25, Crockett discloses a method as described above (see claim 22 rejection).

Although Crockett discloses a method as described, Crockett does not specifically disclose a method wherein the session unavailability mitigation parameter comprises a duration of a reverse push-to-talk session from another mobile communication device.

However, Maggenti discloses a method wherein the session unavailability mitigation parameter comprises duration of a reverse push-to-talk session from another mobile communication device (Crockett discloses that each communication device member can establish forward link and reverse link. In addition, as explained earlier, when a user presses the push-to-talk (PTT) key to send a message, a response message is expected within a predetermined; thus, when a message is sent after the PTT is pressed, a response message is

expected through the forward link within a predetermined time from another communication device) (see col. 6, lines 24-31, and col. 30, lines 43-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 32, Crockett discloses an apparatus as described above (see claim 30 rejection).

Although Crockett discloses an apparatus as described, Crockett does not specifically disclose an apparatus wherein wherein the session unavailability mitigation further comprises one of selecting a packet switched channel type.

However, Maggenti discloses an apparatus wherein the session unavailability mitigation further comprises one of selecting a packet switched channel type (Crockett discloses a MSC, which provides switching and interface circuitry, comprising an Inter Working Function (IFW), which is used for processing and converting voice/or data into packets suitable for a particular data network through which communication takes place. When a user presses the push-to-talk key, a request is generated. With the pressing of the key, session unavailability mitigation takes place for the receiving user. This session unavailability mitigation comprises the selection of the appropriate channel, during which the data is formatted for transmission over the appropriate channel, circuit switched or packet switched) (see col. 6, lines 48-61), establishing a reverse link for a selected time period in anticipation that a reverse push-to-talk session is established (Crockett discloses that each communication device member can establish forward link and

reverse link. In addition, as explained earlier, when a user presses the push-to-talk (PTT) key to send a message, a response message is expected within a predetermined; thus, when a message is sent after the PTT is pressed, a response message is expected through the forward link within a predetermined time) (see col. 6, lines 24-31, and col. 30, lines 43-48) and holding a push-to-talk connection for a selected time period after release of a push-to-talk button in anticipation that a subsequent push-to-talk session is established (the PTT key is pressed so that a message could be sent. The key is released so that a response message can be received within a predetermined time. Therefore, one skill in the art would unhesitatingly conceptualize the inherency of the fact that the session unavailability mitigation comprises holding a PTT connection for a selected period of time after release of the PTT key in anticipation that a subsequent PTT session is established) (see fig. 8, col. 30, lines 43-48, col. 33, lines 59-67, and col. 34, lines 1-9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 33, Crockett discloses an apparatus as described above (see claim 30 rejection).

Although Crockett discloses an apparatus as described, Crockett does not specifically disclose an apparatus wherein the session unavailability mitigation is a mitigation of interruption of a push-to-talk channel.

However, Maggenti discloses an apparatus wherein the session unavailability mitigation is a mitigation of interruption of a push-to-talk channel (the response message that is sent back

Art Unit: 2681

due to the PTT message comprises several fields used to convey information. One the field is defined to indicate granting, denying, or revoking the transmission privilege. And, another field is defined to indicate that a higher priority has been granted transmission privilege. One skill in the art would immediately envision with granting of transmission privilege to the higher priority, an interruption of the push-to-talk channel takes place) (see col. 31, lines 10-24).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to reduce both apparent PTT latency experienced by the talker and total time required to re-establish traffic channels for participating mobiles without negatively impacting system capacity.

Regarding claim 34, Crockett discloses an apparatus as described above (see claim 30 rejection).

Although Crockett discloses an apparatus as described, Crockett does not specifically disclose an apparatus wherein the session unavailability mitigation comprises one of selecting a circuit switched channel type, prohibiting a network handover of the mobile communication device, and prohibiting a network handover of the mobile communication device for a selected time period.

However, Maggenti discloses an apparatus wherein the session unavailability mitigation comprises one of selecting a circuit switched channel type, prohibiting a network handover of the mobile communication device, and prohibiting a network handover of the mobile communication device for a selected time period (i.e., a MSC, which provides switching and interface circuitry, comprising a Inter Working Function (IFW), which is used for processing and converting

Art Unit: 2681

voice/or data into packets suitable for a particular data network through which communication takes place. When a user presses the push-to-talk key, a request is generated. With the pressing of the key, session unavailability mitigation takes place for the receiving user. This session unavailability mitigation comprises the selection of the appropriate channel, during which the data is formatted for transmission over the appropriate channel, circuit switched or packet switched) (see col. 6, lines 48-61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 35, Crockett discloses an apparatus as described above (see claim 30 rejection).

Although Crockett discloses an apparatus as described, Crockett does not specifically disclose an apparatus wherein the push-to-talk metric is based on one of a measurement of a length of a delay of push-to-talk channel activation.

However, Maggenti discloses an apparatus wherein the push-to-talk metric is based on one of a measurement of a length of a delay of a push-to-talk channel activation (i.e. as described above, determination of a push-to-talk metric is based on the predetermination on how long it takes to receive a response message after transmitting a message. In addition, Crockett described a timer, which is called an inactivity timer. The disclosed timer is used for measuring a net's hang time, which is defined as a time period in which no member of a net is transmitting information to the other member) (see col. 30, lines 43-45, col. 34, lines 16-19), and a probability

Art Unit: 2681

of an activation of a subsequent push-to-talk session (one the field, which is used to convey information, is defined to indicate granting, denying, or revoking the transmission privilege. And, another field is defined to indicate that a higher priority has been granted transmission privilege. One skill in the art would immediately envision with granting of transmission privilege to the higher priority, an interruption of the push-to-talk channel takes place. Thus, knowing the fact that a response message is expected within a predetermined time after pressing the PTT key to start a communication process, and that the inactivity timer is used to measure hang time, one skill in the art would unhesitatingly conceptualize the push-to-talk metric is based on a probability of a push-to-talk channel interruption (see col. 30, lines 43-45, col. 31, lines 10-24, and col. 34, lines 16-19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to reduce both apparent PTT latency experienced by the talker and total time required to re-establish traffic channels for participating mobiles without negatively impacting system capacity.

Regarding claim 36, Crockett discloses an apparatus as described above (see claim 30 rejection).

Although Crockett discloses an apparatus as described, Crockett does not specifically disclose an apparatus wherein the push-to-talk metric is based on one of a time measurement of the length of time of a push-to-talk channel interruption.

However, Maggenti discloses an apparatus wherein the push-to-talk metric is based on one of a time measurement of the length of time of a push-to-talk channel interruption (the



Art Unit: 2681

response message that is sent back due to the PTT message comprises several fields used to convey information. One the field is defined to indicate granting, denying, or revoking the transmission privilege. And, another field is defined to indicate that a higher priority has been granted transmission privilege. One skill in the art would immediately envision with granting of transmission privilege to the higher priority, an interruption of the push-to-talk channel takes place. Thus, knowing the fact that a response message is expected within a predetermined time after pressing the PTT key to start a communication process, and that the inactivity timer is used to measure hang time, one skill in the art would unhesitatingly conceptualize that the push-to-talk metric is based on a time measurement of the length of time of a push-to-talk channel interruption) (see col. 30, lines 43-45, col. 31, lines 10-24, and col. 34, lines 16-19), and a probability of a push-to-talk channel interruption (one the field, which is used to convey information, is defined to indicate granting, denying, or revoking the transmission privilege. And, another field is defined to indicate that a higher priority has been granted transmission privilege. One skill in the art would immediately envision with granting of transmission privilege to the higher priority, an interruption of the push-to-talk channel takes place. Thus, knowing the fact that a response message is expected within a predetermined time after pressing the PTT key to start a communication process, and that the inactivity timer is used to measure hang time, one skill in the art would unhesitatingly conceptualize the push-to-talk metric is based on a probability of a push-to-talk channel interruption (see col. 30, lines 43-45, col. 31, lines 10-24, and col. 34, lines 16-19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so

would have been to reduce both apparent PTT latency experienced by the talker and total time required to re-establish traffic channels for participating mobiles without negatively impacting system capacity.

Regarding claim 37, Crockett discloses an apparatus as described above (see claim 30 rejection).

Although Crockett discloses an apparatus as described, Crockett does not specifically disclose an apparatus wherein the push-to-talk metric is based on one of a time between subsequent push-to-talk sessions from the same mobile communication device.

However, Maggenti discloses an apparatus wherein the push-to-talk metric is based on one of a time between subsequent push-to-talk sessions from the same mobile communication device (when a message is sent, the sender expects a response message, and any subsequent message thereafter associated with a message sent, within a predetermined time) (see col. 30, lines 43-45), and a probability of subsequent push-to-talk sessions from the same mobile communication device (when a message is sent, the sender expects a response message, and any subsequent message thereafter associated with a message sent, within a predetermined time) (see col. 30, lines 43-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 38, Crockett discloses an apparatus as described above (see claim 30 rejection).

Although Crockett discloses an apparatus as described, Crockett does not specifically disclose an apparatus wherein the push-to-talk metric is based on a probability of a push-to-talk session from one mobile communication device and a subsequent push-to-talk session from a another mobile communication device on a reverse channel.

However, Maggenti discloses an apparatus wherein the push-to-talk metric is based on a probability of a push-to-talk session from one mobile communication device and a subsequent push-to-talk session from a another mobile communication device on a reverse channel (when a message is sent, the sender expects a response message, and any subsequent message thereafter associated with a message sent, within a predetermined; thus, when a message is sent after the PTT is pressed, a response message is expected through the forward link within a predetermined time) (see col. 6, lines 24-31, and col. 30, lines 43-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

Regarding claim 39, Crockett discloses an apparatus as described above (see claim 30 rejection).

Although Crockett discloses an apparatus as described, Crockett does not specifically disclose an apparatus wherein the push-to-talk metric is based on one of a length of time of a push-to-talk session, and a probability of handoff of the push-to-talk session.

However, Maggenti discloses an apparatus wherein the push-to-talk metric is based on one of a length of time of a push-to-talk session, and a probability of handoff of the push-to-talk

session (i.e. for every transmitted message, a response message is expected within a predetermined time; thus, it is clear that a determination of a push-to-talk metric is based on the predetermination on how long it takes to receive a response message after transmitting a message) (see col. 30, lines 43-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to provide a method wherein different users can engage in group communications with other users of different communication devices and technologies.

6. Claims 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maggenti in view of Crockett.

Regarding claim 26, discloses a method of push-to-talk operation for a mobile communication device, comprising: loading at least one push-to-talk mitigation parameter (i.e. with the pressing of the PTT key, the process of loading a PTT mitigation parameter takes place) (see col. 30, lines 27-30); executing a push-to-talk algorithm to configure at least one push-to-talk session unavailability mitigation based on the push-to-talk mitigation parameter, the push-to-talk session unavailability mitigation controlling the operation of a push-to-talk function of the mobile communication device (when the PTT is pressed, it represents the start of the execution, the configuration, and the controlling of the PTT process. As described above, with the pressing of the key a request message is sent, and a response message is expected within a predetermined time) (see col. 30, lines 43-45); establishing a push-to-talk session for the mobile communication device (as described above, the pressing of the PTT key establishes a PTT session for the

Art Unit: 2681

communication device) (see col. 30, lines 27-30); monitoring at least one metric of push-to-talk operation of the mobile communication device (Crockett describes three fields where the monitoring process takes place; a first field to designate whether the PTT message is a request for the talker privilege or a release of the talker privilege, a second field to identify which CD has sent the PTT message; and a third field is used to provide a unique message identifier to allow subsequent PTT release and PTX messages to reference a specific PTT request) (See col. 30, lines 33-41); modifying a push-to-talk mitigation parameter based on the at least one metric of push-to-talk operation of the mobile communication device (for e.g. if a response message is not received within a predetermined time after having sent a request message, a modification process takes place by retransmitting the request. It is worth to note that part of the modification is the fact that the predetermined time can be for a fixed time or can be altered accordingly) (see col. 30, lines 43-50); and reconfiguring the at least one push-to-talk session unavailability mitigation based on the modified push-to-talk mitigation parameter (modification process and the reconfiguration process are analogous) (see col. 30, lines 43-50).

Although Maggenti discloses a method as described, Maggenti does not specifically describe a method wherein the metric of push-to-talk operation being based on the usage of the communication device by a user of the mobile communication device.

However, Crockett discloses a method wherein the metric of push-to-talk operation being based on the usage of the communication device by a user of the mobile communication device (i.e., after the regional dispatcher has retrieved the location of the group members, it may determine the MCU to which the call may be assigned. The regional dispatcher may make this decision based on the users' location information, loading, and availability of the MCUs. In an

Art Unit: 2681

intra-regional call the users may be located in the same region, therefore the regional dispatcher may check the loading and availability of the MCU complex in the local region. If the regional dispatcher receives an indication that the local MCU complex is overloaded or temporarily experiencing operational failures, then it may assign the call to a remote MCU) (see col. 13, line 60 through col. 14, line 1); also see col. 8, lines 44-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings to arrive at the claimed invention. A motivation for doing so would have been to reduce both apparent PTT latency experienced by the talker and total time required to re-establish traffic channels for participating mobiles without negatively impacting system capacity.

Regarding claim 27, Maggenti discloses a method (see claim 26 rejection) wherein session unavailability comprises one of a delay of an activation of a push-to-talk session, and an interruption of a push-to-talk session (Maggenti discloses delay is associated with transitioning a communication device out of the dormant state to the connected state; thus, one skill in the art would unhesitatingly conceptualize that the session of unavailability is comprised a delay of an activation of a push-to-talk session) (see col. 35, lines 48-49).

Regarding claim 28, Maggenti discloses a method (see claim 26 rejection) wherein the session unavailability mitigation comprises one of selecting a packet switched channel type (Maggenti discloses a MSC, which provides switching and interface circuitry, comprising a Inter Working Function (IFW), which is used for processing and converting voice/or data into packets suitable for a particular data network through which communication takes place. When a user presses the push-to-talk key, a request is generated. With the pressing of the key, session

Art Unit: 2681

unavailability mitigation takes place for the receiving user. This session unavailability mitigation comprises the selection of the appropriate channel, during which the data is formatted for transmission over the appropriate channel, circuit switched or packet switched) (see col. 6, lines 48-61), establishing a reverse link for a selected time period unless a reverse push-to-talk session is established (Maggenti discloses that each communication device member can establish forward link and reverse link. In addition, as explained earlier, when a user presses the push-to-talk (PTT) key to send a message, a response message is expected within a predetermined; thus, when a message is sent after the PTT is pressed, a response message is expected through the forward link within a predetermined time) (see col. 6, lines 24-31, and col. 30, lines 43-48), and holding a push-to-talk connection for a selected time period after release of a push-to-talk button unless a subsequent push-to-talk session is established (the PTT key is pressed so that a message could be sent. The key is released so that a response message can be received within a predetermined time. Therefore, one skill in the art would unhesitatingly conceptualize the inherency of the fact that the session unavailability mitigation comprises holding a PTT connection for a selected period of time after release of the PTT key in anticipation that a subsequent PTT session is established) (see fig. 8, col. 30, lines 43-48, col. 33, lines 59-67, and col. 34, lines 1-9).

Regarding claim 29, Maggenti discloses a method (see claim 26 rejection) wherein the session unavailability mitigation comprises one of selecting a circuit switched channel type, prohibiting a network handover of the mobile communication device, and prohibiting a network handover of the mobile communication device for a selected time period (Maggenti discloses a MSC, which provides switching and interface circuitry, comprising a Inter Working Function

(IFW), which is used for processing and converting voice/or data into packets suitable for a particular data network through which communication takes place. When a user presses the push-to-talk key, a request is generated. With the pressing of the key, session unavailability mitigation takes place for the receiving user. This session unavailability mitigation comprises the selection of the appropriate channel, during which the data is formatted for transmission over the appropriate channel, circuit switched or packet switched) (see col. 6, lines 48-61).

7. Claims 9-10, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crockett in view of Dailey, U.S. Patent No. 6449491.

Regarding claim 9, Crockett discloses a method as described above (see claim 1 rejection).

Although Crockett discloses a method of push-to-talk operation as described above, Crockett fails to disclose a method of push-to-talk operation wherein the session unavailability mitigation comprises prohibiting a network handover of the mobile communication device.

However, Dailey discloses a terminal, which includes a PTT button, operatively associated with a disclosed controller and it is used to initiate and conduct half-duplex group calls. During the half-duplex group calls, most terminals of the group are not transmitting at any given time; as a result, these terminals cannot transmit information that is needed for handoffs. Thus, network handover would be prohibited because of this inability (see col. 8, lines 64-67).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Crockett with the teachings of Dailey to arrive at a PTT method wherein the session unavailability mitigation comprises prohibiting a network handover



Art Unit: 2681

of the mobile communication device. Taking into consideration the process of transferring data session from one channel to another, as described by Crockett, the combination of Crockett and Dailey to arrive at the claimed invention would be a mere addition to the method disclosed by Crockett for his method inherently includes the teachings of Dailey.

Regarding claim 10, Crockett discloses a method as described above (see claim 1 rejection).

Although Crockett discloses a method of push-to-talk operation as described above, Crockett fails to disclose a PTT method wherein the session unavailability mitigation comprises prohibiting a network handover of the mobile communication device for a selected time period.

However, Dailey disclosed that in order to provide handoff, information must be transmitted over the traffic channel by the terminal (see col. 7, lines 60-67).

Therefore, it would have obvious to one of ordinary skill in the art at the time of the invention, taking into consideration a response message is expected within a predetermined time when the PTT key is pressed, to immediately conceptualize to combine Crockett and Dailey to obtain the claimed invention. The motivation to do so would have been to be able to use fewer channels for the group call.

Regarding claim 19, Crockett discloses a method as described above (see claim 1 rejection).

Although Crockett disclosed a method as described above, Crockett fails to disclose a method wherein the push-to-talk metric is based on a probability of handoff of the push-to-talk session

However, Dailey discloses that handoffs can be provided as terminals move from an area

Art Unit: 2681

to another (see col. 8, lines 60-64)

Therefore, it would have obvious to one of ordinary skill in the art at the time of the invention, taking into consideration a response message is expected within a predetermined time when the PTT key is pressed, to immediately conceptualize to combine Crockett and Dailey to obtain the claimed invention. The motivation to do so would have been to be able to use fewer channels for the group call.

### *Conclusion*

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre-Louis Desir whose telephone number is 703-605-4312. The examiner can normally be reached on (571) 272-7799.

Art Unit: 2681

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pierre-Louis Desir

AU 2681

07/05/2005

**JEAN GELIN**  
**PRIMARY EXAMINER**

